

REMARKS

I. Introduction

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claims 1-4 and 6 Under 35 U.S.C. § 102

Claims 1-4 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by USP No. 5,835,493 to Magee. Applicants respectfully traverse this rejection for at least the following reasons.

Claims 1 and 4 recite in-part a stream converting/recording method comprising a step of separating a first transport stream into a first TS packet string formed from TS packets that have a prescribed packet identifier and a second TS packet string formed from TS packets that do not have the prescribed packet identifier, and a step of converting a bit rate of the first TS packet string so as to produce a third TS packet string.

Specifically, in accordance with one embodiment of the present invention, the packet separating section 103 separates the packets of the first transport stream TS1. More specifically, the first transport stream TS1 is separated into a first TS packet string P1 formed from TS packets that have a prescribed packet identifier (PID), and a second TS packet string PS2 formed from TS packets that do not have the prescribed PID. Every time the packet separating section 103 finds the header of a TS packet, it checks the PID of the video TS packet so as to output the separated TS packets to the bit-rate converting section 104 as the first TS packet string P1, while the remaining TS packets are output to the buffer section 107 as the second TS packet string P2 (see, page 13, lines 2-6 and page 14, lines 10-18 of the specification). Then, the rate converting section 302 of the bit-

rate converting section 104 converts the bit rate of the video data for the video PES packet PES1 output from the PES packet extracting section 301, and outputs the bit-rate converted PES packets CPES1 to the output control section 303. The foregoing method provides a simple structure in which a stream of digital broadcasting can be recorded for a long duration of time, even on a small-capacity recording medium (see, e.g., page 4, lines 14-16 of the specification).

Turning to the cited prior art, it is asserted that Magee discloses, at col. 9, lines 22-28, the foregoing claim elements. However, at a minimum, Magee is silent with regard to separating a first transport stream into a first TS packet string formed from TS packets that have a prescribed packet identifier and a second TS packet string formed from TS packets that do not have the prescribed packet identifier, or converting a bit rate of the first TS packet string so as to produce a third TS packet string, as recited by claims 1 and 4.

Indeed, contrary to the conclusion set forth in the pending rejection, Magee discloses that the transport stream is organized into fixed length packets, wherein each transport packet header includes a synchronization value followed by a PID (see, col. 2, lines 5-19), such that depending on the packet identifier (PID) of each transport packet, the DLM 110 extracts and transfers the transport packet onto the DM bus or the C bus (see, col. 9, lines 21-33). In other words, it would appear that Magee discloses that each transport packet carries a packet identifier, and does not disclose or suggest a packet that carries a packet identifier and another packet that does not carry the packet identifier in the manner alleged by the Examiner.

Thus, at a minimum, Magee fails to disclose or suggest a stream converting/recording method comprising a step of separating a first transport stream into a first TS packet string formed from TS packets that have a prescribed packet identifier and a second TS packet string formed from TS packets that do not have the prescribed packet identifier, as recited by claims 1 and 4.

Furthermore, it is asserted in the Office Action that Magee discloses, at col. 3, lines 39-41, performing the bit rate conversion by the video preprocessor module 17, which performs different kinds of analysis and modification of the input digital video (see, page 3 of Office Action).

However, at the cited portion, Magee merely discloses performing analysis, such as sample rate conversion, so that the modified video is output to the video encoder module 19 via the V bus. Nowhere does Magee disclose or suggest converting a bit rate of any packet having a prescribed packet identifier. The Examiner has neither identified which elements of Magee correspond to the claimed first transport stream, second transport stream, second TS packet string and third TS packet string. Thus, at a minimum, Magee does not disclose or suggest converting a bit rate of the first TS packet string so as to produce the third TS packet, as recited by claims 1 and 4.

Additionally, claim 4 recites a stream recording method comprising a step of determining, with reference to the reference time, the time of receipt of each TS packet forming the second transport stream, and recording the second transport stream together with the determined time of receipt onto a recording medium.

Specifically, in accordance with one embodiment of the present invention, the buffer section 107 receives the second TS packet string P2 formed from the TS packets other than the video TS packets output from the packet separating section 103, the time of receipt T2 of each TS packet of the second TS packet string P2 output from the packet separating section 103, and the delayed reference time DST output from the system control section 102. When the time of receipt T2 of the TS packet received from the packet separating section 103 matches the delayed reference time DST, the TS packet corresponding to that time of receipt is output to the packet multiplexing section 105.

In the pending Office Action, the Examiner asserts that the DLM 110 keeps track of the time each transport packet carrying a PCR is received. However, contrary to the conclusion set forth in

the pending rejection, Magee discloses that the reference time information extraction and time of receipt determination are performed by using the DLM 110 to determine the “dwell” time (alleged delay) or time in which the program clock reference (PCR) (alleged reference time information) bearing the transport packet has been enqueued in the DLM 110, and that this dwell time is added to the PCR of the transport packet prior to transfer on the DM bus (see, e.g., col. 12, lines 41-48). As such, nowhere does Magee disclose or suggest determining, with reference to the dwell time which is added to the PCR, the time of receipt of each TS packet forming any second transport stream, or recording any second transport stream with the determined time of receipt onto a recording medium, as recited by claim 4. Indeed, the Examiner has neither identified which element of Magee corresponds to the time of receipt of each of the alleged TS packets. It would appear that Magee merely discloses a dwell time, and does not disclose or suggest determining a time of receipt of each TS packet forming a second transport stream, or recording a time of receipt onto a recording medium in the manner alleged by the Examiner.

Thus, at a minimum, Magee fails to disclose or suggest a stream recording method comprising a step of determining, with reference to the reference time, time of receipt of each TS packet forming the second transport stream, and recording the second transport stream together with the determined time of receipt onto a recording medium, as recited by claim 4.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Magee fails to disclose the foregoing claim elements, it is clear that Magee does not anticipate claim 1 or 4, or any of the claims dependent thereon.

III. The Rejection Of Claims 5-10 Under 35 U.S.C. § 103

Claims 5-10 are rejected under 35 U.S.C. § 103 as being unpatentable over Magee.

Applicants respectfully traverse this rejection for at least the following reasons.

Claims 5 and 10 recite in-part a stream recording method/apparatus comprising a step of selecting TS packets other than TS packets having a packet identifier from a first transport stream TS1 so as to output the selected TS packets as a second transport stream TS2. Claims 8 and 9 recite in-part a stream converting/recording apparatus/method comprising a packet separation section for separating a first transport stream into a first TS packet string formed from TS packets that have a prescribed packet identifier and a second TS packet string formed from TS packets that do not have the prescribed packet identifier, and a bit-rate converting section for converting a bit rate of the first TS packet string so as to produce a third TS packet string.

In accordance with one embodiment of the present invention, the packet separating section 103 separates the packets of the first transport stream TS1. More specifically, the first transport stream TS1 is separated into a first TS packet string P1 formed from TS packets that have a prescribed packet identifier (PID), and a second TS packet string PS2 formed from TS packets that do not have the prescribed PID. Every time the packet separating section 103 finds the header of a TS packet, it checks the PID of the video TS packet so as to output the separated TS packets to the bit-rate converting section 104 as the first TS packet string P1, while the remaining TS packets are output to the buffer section 107 as the second TS packet string P2 (see, page 13, lines 2-6 and page 14, lines 10-18 of the specification). Then, the rate converting section 302 of the bit-rate converting section 104 converts the bit rate of the video data for the video PES packet PES1 output from the PES packet extracting section 301, and outputs the bit-rate converted PES packets CPES1 to the output control section 303. The foregoing method provides a simple structure in which a stream of

digital broadcasting can be recorded for a long duration of time, even on a small-capacity recording medium (see, e.g., page 4, lines 14-16 of the specification).

Turning to the cited prior art, it is asserted that Magee discloses, at col. 9, lines 22-28, the foregoing claim elements. However, in contrast to the present invention, Magee discloses that the transport stream is organized into fixed length packets, wherein each transport packet header includes a synchronization value followed by a PID (see, col. 2, lines 5-19), such that depending on the packet identifier (PID) of each transport packet, the DLM 110 extracts and transfers the transport packet onto the DM bus or the C bus (see, col. 9, lines 21-33). In other words, it would appear that Magee discloses that each transport packet carries a packet identifier, and does not disclose a packet that carries a packet identifier and another packet that does not carry the packet identifier in the manner alleged by the Examiner. As such, Magee is incapable of selecting TS packets other than the TS packets having a packet identifier, or separating a packet string formed from TS packets that have a prescribed packet identifier and another TS packet string formed from TS packets that do not have the prescribed packet identifier in the manner alleged by the Examiner.

Thus, at a minimum, Magee fails to disclose or suggest a stream recording method/apparatus comprising a step of selecting TS packets other than TS packets having a packet identifier from a first transport stream TS1 so as to output the selected TS packets as a second transport stream TS2, as recited by claims 5 and 10, or a stream converting/recording apparatus/method comprising a packet separation section for separating a first transport stream into a first TS packet string formed from TS packets that have a prescribed packet identifier and a second TS packet string formed from TS packets that do not have the prescribed packet identifier, and a bit-rate converting section for converting a bit rate of the first TS packet string so as to produce a third TS packet string, as recited by claims 8 and 9.

Additionally, claim 5 recites a stream recording method comprising a step of determining, with reference to the reference time, the time of receipt of each TS packet forming the second transport stream, and recording the second transport stream together with the determined time of receipt onto a recording medium.

Specifically, in accordance with one embodiment of the present invention, the buffer section 107 receives the second TS packet string P2 formed from the TS packets other than the video TS packets output from the packet separating section 103, the time of receipt T2 of each TS packet of the second TS packet string P2 output from the packet separating section 103, and the delayed reference time DST output from the system control section 102. When the time of receipt T2 of the TS packet received from the packet separating section 103 matches the delayed reference time DST, the TS packet corresponding to that time of receipt is output to the packet multiplexing section 105.

In the pending Office Action, the Examiner asserts that the DLM 110 keeps track of the time each transport packet carrying a PCR is received. However, contrary to the conclusion set forth in the pending rejection, Magee discloses that the reference time information extraction and time of receipt determination are performed by using the DLM 110 to determine the “dwell” time (alleged delay) or time in which the program clock reference (PCR) (alleged reference time information) bearing the transport packet has been enqueued in the DLM 110, and that this dwell time is added to the PCR of the transport packet prior to transfer on the DM bus (see, e.g., col. 12, lines 41-48). As such, nowhere does Magee disclose or suggest determining, with reference to the dwell time which is added to the PCR, the time of receipt of each TS packet forming any second transport stream, or recording any second transport stream with the determined time of receipt onto a recording medium, as recited by claim 5. Indeed, the Examiner has neither identified which element of Magee corresponds to the time of receipt of each of the alleged TS packets. It would appear that

Magee merely discloses a dwell time, and does not disclose or suggest determining a time of receipt of each TS packet forming a second transport stream, or recording a time of receipt onto a recording medium in the manner alleged by the Examiner.

Thus, at a minimum, Magee fails to disclose or suggest a stream recording method comprising a step of determining, with reference to the reference time, time of receipt of each TS packet forming the second transport stream, and recording the second transport stream together with the determined time of receipt onto a recording medium, as recited by claim 5.

Moreover, claims 8 and 9 recite in-part a stream converting/recording apparatus comprising a bit-rate converting section for converting a bit rate of the first TS packet string so as to produce a third TS packet string.

In the pending Office Action, it is further asserted that Magee discloses, at col. 3, lines 39-41, performing the bit rate conversion by the video preprocessor module 17, which performs different kinds of analysis and modification of the input digital video (see, page 3 of Office Action and col. 3, lines 39-41).

However, in contrast to the Examiner's assertion, at the cited portion, Magee merely discloses performing analysis, such as sample rate conversion, so that the modified video is output to the video encoder module 19 via the V bus. Nowhere does Magee disclose or suggest converting a bit rate of any packet having a prescribed packet identifier. The Examiner has neither identified which elements of Magee correspond to the claimed first transport stream, second transport stream, second TS packet string and third TS packet string. Thus, at a minimum, Magee does not disclose or suggest a stream converting/recording apparatus comprising a bit-rate converting section for **converting a bit rate of the first TS packet string** so as to produce the third TS packet, as recited by claims 8 and 9.

As each and every limitation must be either disclosed or suggested by the cited prior art in order to establish a *prima facie* case of obviousness (see, M.P.E.P. § 2143.03), and Magee fails to do so, it is respectfully submitted that claims, 5, 8, 9 and 10 are patentable over the prior art.

IV. All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1, 4, 5, 8, 9 and 10 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

For all of the foregoing reasons, it is submitted that claims 2, 3, 6 and 7 are patentable over the cited prior art. Accordingly, it is respectfully submitted that the rejections of claims 1-4 and 6 under 35 U.S.C. § 102 and claims 5-10 under 35 U.S.C. § 103 have been overcome.

V. Conclusion

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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